

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A method for differentiating osteoclast precursor cells into osteoclasts, which comprises culturing the osteoclast precursor cells in the absence of accessory cells.

Claim 2 (Original): The method as claimed in claim 1, which uses a culture medium containing IL-3, IL-7, GM-CSF, eotaxin, eotaxin-2, eotaxin-3 or a mixture of two or more of them.

Claim 3 (Currently Amended): The method as claimed in claim 1 ~~or 2~~, which uses a culture medium containing a culture supernatant of mitogen-stimulated peripheral blood mononuclear cells.

Claim 4 (Original): The method as claimed in claim 3, wherein the culture supernatant of mitogen-stimulated peripheral blood mononuclear cells is a culture supernatant of phytohemagglutinin-stimulated human peripheral blood mononuclear cells.

Claim 5 (Original): A method for isolating osteoclast precursor cells, which comprises culturing peripheral blood or joint fluid in the absence of cytokine for 1 to 3 weeks.

Claim 6 (Original): The method as claimed in claim 5, in which the osteoclast precursor cells are isolated by adding peripheral blood or joint fluid to essential medium for

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mammalian cells in the absence of cytokine and culturing them at 35 - 37 °C in 5 - 7 % CO<sub>2</sub>-containing air for 1 - 3 weeks to perish cells except osteoclast precursor cells.

Claim 7 (Currently Amended): An osteoclast precursor cell, which is obtainable by the method as claimed in claim 5 ~~or~~ 6.

Claim 8 (Currently Amended): A method for differentiating osteoclast precursor cells obtained by the method claimed in claim 5 ~~or~~ 6 into osteoclasts, which comprises culturing the osteoclast precursor cells in the absence of accessory cells.

Claim 9 (Original): The method as claimed in claim 8, which uses a culture medium containing IL-3, IL-7, GM-CSF, eotaxin, eotaxin-2, eotaxin-3 or a mixture of two or more of them.

Claim 10 (Currently Amended): The method as claimed in claim 8 ~~or~~ 9, which uses a culture medium containing a culture supernatant of mitogen-stimulated peripheral blood mononuclear cells.

Claim 11 (Original): The method as claimed in claim 10, wherein the culture supernatant of mitogen-stimulated peripheral blood mononuclear cells is a culture supernatant of phytohemagglutinin-stimulated human peripheral blood mononuclear cells.

Claim 12 (Currently Amended): An osteoclast, which is obtainable by the method as claimed in claim 1 ~~any one of claims 1 to 4 and 8 to 11~~.

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Claim 13 (Currently Amended): A method for screening agents for metabolic bone diseases, which comprises using the osteoclast precursor cells isolated by the method as claimed in claim 5 ~~or 6~~.

Claim 14 (Original): A method for screening agents for metabolic bone diseases, which comprises using the osteoclast precursor cells as claimed in claim 7.

Claim 15 (Currently Amended): A method for screening agents for metabolic bone diseases, which comprises using the osteoclasts obtained by the method as claimed in claim 1 ~~any one of claims 1 to 4 and 8 to 11~~.

Claim 16 (Original): A method for screening agents for metabolic bone diseases, which comprises using the osteoclasts as claimed in claim 12.

Claim 17 (Currently Amended): An agent for metabolic bone diseases, which is obtainable by the method as claimed in claim 13 ~~any one of claims 13 to 16~~.

Claim 18 (New): An osteoclast, which is obtainable by the method as claimed in claim 8.

Claim 19 (New): A method for screening agents for metabolic bone diseases, which comprises using the osteoclasts obtained by the method as claimed in claim 8.

Claim 20 (New): The method of claim 1, wherein said culture medium contains at least one cytokine which induces the differentiation of preosteoclasts into osteoclasts.